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KOREAN PATENT APPLICATION
UNDER SERIAL NO. 15634/2001

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IN THE NAME OF : LG ELECTRONICS INC.

FOR: TV WITH LANGUAGE SELECTION MODE AND CONTROL
METHOD OF THE SAME

IN WITNESS WHEREOF, I SET MY HAND HERETO

THIS 20TH DAY OF SEPTEMBER, 2005

BY

LEE, Shin Suk

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[Translation]

PATENT APPLICATION

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The Patent Office

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【Title of the Invention】 TV WITH LANGUAGE SELECTION MODE AND
CONTROL METHOD OF THE SAME

【Applicant】 LG ELECTRONICS INC.
Code No. : 1-1998-000275-8

【Attorney】 **【Names】** KIM, Yong In
【Code No.】 9-1998-000022-1
【General Authorization registration No.】 2000-005155-0

【Attorney】 **【Names】** SHIM, Chang Sub
【Code No.】 9-1998-000279-9
【General Authorization registration No.】 2000-005154-2

【Inventor】 **【Name】** : LEE, Jae-Kyung
【Resident Reg. No.】 660210-2683510
【Zip code】 702-240
【Address】 Hansin 1-Cha Apt. 104-203, Gwaneum-Dong, Buk-Ku,

Daegu, Korea

【Nationality】 Republic of Korea

【Request for Examination】 Filed

This application is hereby filed pursuant to Article 42 of the Patent Law and request for examination is filed pursuant to Article 60 of the Patent Law.

/S/ Attorney: PARK, Jang Won

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【Attached document】 1. Abstract, Specification (Drawing) – 1copy



[Translation]

ABSTRACT OF THE DISCLOSURE

[Abstract]

A TV having a language selection function and its control method output character information in a language selected by a user. The TV having a language selection function includes: a translation relay site server for relaying translation of character information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting side; a network interface unit connected with the translation relay site server; a memory unit storing translation relay site information and translation-related operation program; a controller connected to the translation relay site server by using the translation relay site information stored in the memory unit, transmitting corresponding character information, and receiving translated character information through the translation relay site server; and a video processing unit for displaying the character information received from the controller on a screen.

[Representative drawing]

Figure 2

[Index word]

Translation site/URL.

[SPECIFICATION]

[Title of the Invention]

TV WITH LANGUAGE SELECTION FUNCTION AND CONTROL METHOD THEREOF

[Brief description of the Drawings]

Figures 1 is a block diagram showing the construction of a digital TV in accordance with a related art;

Figure 2 is a block diagram showing the construction of a digital TV having a language selection function in accordance with the present invention;

Figure 3 is a flow chart of a method for selecting a language and outputting the selected language in accordance with the present invention; and

Figure 4 is a flow chart for explaining a language translation operation of Figure 3.

**** Explanation for the major reference numerals ****

11 : tuner	12 : VSB demodulator
13 : demultiplexer	14 : MPEG audio/video decoder
15 : audio processing unit	16 : video processing unit
17 : memory unit	18 : controller
19 : network interface unit	
20 : translation relay site server	

[Detailed description of the invention]

[Object of the invention]

[Field of the invention and background art]

The present invention relates to a TV (television), in particular to a TV (Television) having a language selection function and a control method of the same which is capable of displaying character information included in a broadcast signal on a screen.

Recently, various types of televisions from a small model such as a 14 inch television to a projection television not less than 60 inch are introduced to a consumer.

In the meantime, the analog TV has lots of problems while developing to a scale-up and a high-function. In other words, there is the problem such as a picture quality lowering, a broadcast channels limitation, an one-way mediums limitation, and market saturation of an analog TV etc. Accordingly, a digital television is introduced in order to make up for the weak points in the analog television.

Presently, developing of the technology about the digital TV is progressing actively, the technology has entered a new phase performing a test broadcast or a regular broadcast about the digital TV.

The digital TV comprises an additional information providing function as well as a basic video and audio information providing function, among them there is a character information and audio information providing functions such as a caption, a EPG (Electronic Program Guide) etc.

Hereinafter, a construction of the digital TV in accordance with the prior art will now be described with reference to accompanying Figure 1.

Figure 1 is a block diagram illustrating the construction of the digital TV in accordance with the prior art.

As depicted in Figure 1, the digital TV comprises a tuner 1 for tuning in to a

broadcast signal of a user selection channel among broadcast signals of each channel received through an antenna, a VSB (Vestigial Side Band) demodulator 2 for correcting an error by demodulating the user selection broadcast signal and outputting the signal after converting it into a transport stream format, a demultiplexer 3 for demultiplexing the transport stream (dividing into video, audio and additional information signal sequence), a MPEG (Moving Picture Expert Group) audio/video decoder 4 for outputting video and audio signals by extending / restoring the demultiplexed transport stream (video and audio signal sequences), an audio processing unit 5 for converting the audio signal into an analog audio signal in order to output the audio signal through a speaker, a video processing unit 6 for converting the video signal into luminance and color signals in order to display the video signal on a screen, a memory unit 7, a control unit 8 for controlling each part of the system and performing an database operation about the stored additional information in order to display the information by a graphic user interface, and a network interface unit 9 for performing a two-way communication such as the internet. An output operation of character information of the digital TV will now be described.

First, the control unit 8 judges whether a character information mode for providing character information such as a caption or an EPG (Electronic Program Guide) to a user is 'ON'. In addition, when the user operates the character information mode as an 'ON' state, the control unit 8 transmits user selection character information to the MPEG audio/video decoder 4 by setting a pertinent packet ID in the demultiplexer 3.

After that, the control unit 8 controls the MPEG audio/video decoder 4 to extract and transmit only the user selection character information in the character information. Herein, the control unit 8 decodes the character information transmitted from the MPEG audio/video decoder 4, constructs an OSD corresponding to the transmitted character information, and stores it temporarily in the memory unit 7.

And, the control unit 8 transmits the OSD to the video processing unit 6 in order to display it by mixing with a broadcast video. At the same time, it performs signal processing of audio information synchronized with the OSD and outputs it to a speaker. Herein, the character information is outputted only as the English language or a certain region language. In other words, because character information of the TV in accordance with the prior art is outputted as only one language, it is impossible to perform a language selection in accordance with a user taste, accordingly it is impossible to satisfy a desire of a user.

As described above, in the digital TV in accordance with the prior art, because character information is outputted as only the English language or a certain region language, it is impossible to select a language in accordance with a user taste, accordingly it can not satisfy a desire of a user.

[Technical gist of the present invention]

The present invention relates to a stator supporting apparatus for a reciprocating compressor, and particularly, to a stator supporting apparatus for a reciprocating compressor which is capable of strongly fixing an inner stator and attenuating vibration of the compressor.

Therefore, an object of the present invention is to provide a TV having a language selection function and its control method which are capable of outputting character information in a language selected by a user.

[Construction of the present invention]

To achieve the above object, there is provided a TV having a language selection function including: a translation relay site server for relaying translation of character

information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting side; a network interface unit connected with the translation relay site server; a memory unit storing translation relay site information and translation-related operation program; a controller connected to the translation relay site server by using the translation relay site information stored in the memory unit, transmitting corresponding character information, and receiving translated character information through the translation relay site server; and a video processing unit for displaying the character information received from the controller on a screen.

To achieve the object, there is also provided a TV having a language selection function including: a network interface unit for allowing connection with a translation site; a memory unit translation site information of each language and a translation-related operation program; a controller connected to a translation site corresponding to a language set by a user by using the transmission site information of each language stored in the memory unit, transmitting corresponding character information according to a translation-related operation program, and receiving a translation-completed character information through a translation site; and a video processing unit for displaying character information received from the controller on a screen.

To achieve the above object, there is also provided a method for controlling a TV having a language selection function, the TV being connected with a translation relay site for relaying translation of character information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting

side, including: determining whether language of currently received character information and a user set language are identical; transmitting language information and character information to the translation relay site if the language of the character information and the user set language are not identical; translating the character information into a corresponding language by the translation relay site, and transmitting the translated character information to the TV; and receiving the translated character information by the translation relay site and displaying it on a screen.

To achieve the above object, there is also provided a method for controlling a TV having a language selection function, the TV being connected with an Internet translation site; including: determining whether language of currently received character information and a user set language are identical; connecting to an Internet translation site corresponding to the user set language among previously stored Internet translation sites, and transmitting character information to request its translation; and receiving translated character information from the Internet translation site and displaying it on a screen.

The TV having a language selection function and its control method in accordance with the present invention will now be described with reference to the accompanying drawings.

Figure 2 is a block diagram showing the construction of a digital TV having a language selection function in accordance with the present invention, Figure 3 is a flow chart of a method for selecting a language and outputting the selected language in accordance with the present invention, and Figure 4 is a flow chart for explaining a language translation operation of Figure 3.

As shown in Figure 2, the digital TV having a language selection function includes a tuner 11 for selecting a broadcast signal, a VSB demodulator 12 for demodulating a VSB signal, correcting an error of the signal, and converting the signal

into a transport stream form, a demultiplexer 13 for separating the time-multiplexed transport stream into a demultiplexed signal stream, namely, video, audio and supplementary information signal stream, an MPEG audio/video decoder 14 for extending/restoring the video and audio signal stream, an audio processing unit 15 for converting the audio signal outputted from the MPEG audio/video decoder 4 into an analog audio signal so as to be outputted through a speaker; a video processing unit 16 for converting the video signal outputted from the MPEG audio/video decoder 14 into luminance and chrominance signal so as to be displayed on a screen, a memory unit 17, a controller 18 for controlling each element of a system and storing the supplementary information outputted from the demultiplexer 13 into an information form to be displayed by a graphic user interface (GUI), a network interface unit 19 for bit-directional communication such as the Internet; and a translation relay site server 20 for relaying translation of character information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting side.

At this time, the memory unit 17 includes a URL (Uniform Resource Locator) information of the translation relay site.

The operation of the present invention constructed as described above will now be explained.

First, the controller 18 determines whether a language shift key is inputted, namely, whether a user inputs a language shift key (step S31).

Subsequently, if a language shift key is inputted, the controller 18 updates currently set user language information to a user selected language (step S32).

The controller 18 determines whether a current character information service

mode is 'ON' (step S33).

If the character information service mode is not 'ON', the controller 18 controls elements such as the tuner 11, the demultiplexer 13, the MPEG audio/video decoder 14, the video processing unit 16 and the video processing unit 15 to output general broadcast program video and audio (step S34).

If, however, the character information service mode is 'ON', the controller 18 checks whether a language of the character information included in a received transport stream is identical to the user set language (step S35).

If the language of the character information is not identical to the user set language, the controller reads URL information of a translation relay site from the memory unit 17 and is connected to a translation relay site server 20 through the network interface unit 19 (step S36).

In this case, the URL information is URL information of a translation relay site that manages an overall relay operation such as connection to a corresponding Internet site for translating the character information into a user language by a TV manufacturer, or URL information of Internet translation sites of each language for directly performing translation.

The controller 18 transmits character language information for defining a type of the language of the character information and user language information for defining a type of the language set by the user to the translation relay site through the network interface unit 19 (step S37).

Subsequently, the controller 18 transmits character information to be actually transmitted to the translation relay site through the network interface unit 19 (step S38).

In this case, the character information can include audio information in synchronization with corresponding character information.

The translation relay site translates the character information into the user language, and when the translation is completed, the translation relay site transmits the translated character information to the TV through the network interface unit 19.

And then, the controller checks whether the translated character information is received (step S39). When the translated character information is received, the controller 18 transmits it to the MPEG audio/video decoder 14.

The MPEG audio/video decoder 14 interprets the translated character information or the character information and corresponding audio information and constitutes an OSD with respect to the character information.

And then, the MPEG audio/video decoder 14 transmits the OSD to the video processing unit 16 so as to be mixed with a broadcast image and displayed, and, at the same time, processes the audio information in synchronization with the OSD through the audio processing unit 15 and outputs it (step S40).

At this time, a detailed operation of the translation relay site which translates the character information or the character information and corresponding audio information into the user language, and when the translation is completed, the translation relay site transmits the translated character information to the TV through the network interface unit 19, will now be described with reference to Figure 4.

First, in case of a translation relay site provided by a TV manufacturer, the corresponding server 20 checks whether language information, namely, character language information for defining a type of a language of the character information, user language information for defining a type of a language set by the user, and character information to be actually transmitted, is received (step S41).

When the language information and character information are received from the TV through the network interface unit 19, the server is connected with a translation site

suitable for the language information, for example, with a translation site which translates the English into an Indian language if the character information is in English and user language information is in Indian (step S42).

And then, the server transmits the character information which has been transmitted from the TV to the translation site and requests translation of it (step S43).

Subsequently, the server checks whether the translation site has completed translation (step S44). When translation is completed, the server transmits the translated character information to the TV through the network interface unit 19.

In this manner, when the translation relay site provided by the TV manufacturer is used, the server of the translation relay site performs translation quickly and accurately, and the translation site information can be updated anytime.

Meanwhile, if translation is performed directly through an Internet translation site, rather than using the translation relay site, first, the TV controller 18 detects the language of the current character information and user set language.

The TV controller 18 is directly connected with a URL of an Internet translation site corresponding to a language requested to be translated by using a previously stored translation-related operation program and translation site information, and transmits character information to request translation.

And then, when the corresponding translation site completes translation, the translated character information is downloaded, decoded, video-processed, and then, outputted.

[Effect of the invention]

As so far described, the TV having the language selection function and its control method in accordance with the present invention have the following advantages. That is,

character information such as a caption provided through a supplementary function of the TV can be quickly and accurately translated into a language desired by a user through the translation relay site provided by the TV manufacturer or through the Internet translation site, and then provided, so that user convenience can be enhanced.

What is claimed is:

1. A TV having a language selection function comprising:

a translation relay site server for relaying translation of character information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting side;

a network interface unit connected with the translation relay site server; a memory unit storing translation relay site information and translation-related operation program;

a controller connected to the translation relay site server by using the translation relay site information stored in the memory unit, transmitting corresponding character information, and receiving translated character information through the translation relay site server; and

a video processing unit for displaying the character information received from the controller on a screen.

2. A TV having a language selection function comprising:

a network interface unit for allowing connection with a translation site;

a memory unit storing translation site information of each language and a translation-related operation program;

a controller connected to a translation site corresponding to a language set by a user by using the translation site information of each language stored in the memory unit, transmitting corresponding character information according to a translation-related operation program, and receiving a translation-completed character information through a

translation site; and

a video processing unit for displaying character information received from the controller on a screen.

3. A method for controlling a TV having a language selection function, the TV being connected with a translation relay site for relaying translation of character information requested by an outside through connecting to a translation site, uploading character information to the translation site, downloading translated character information from the translation site, and transmitting the translated character information to a corresponding character information transmitting side, comprising:

determining whether language of currently received character information and a user set language are identical;

transmitting language information and character information to the translation relay site if the language of the character information and the user set language are not identical;

translating the character information into a corresponding language by the translation relay site, and transmitting the translated character information to the TV; and

receiving the translated character information by the translation relay site and displaying it on a screen.

4. The method of claim 3, wherein the language information is information on a type of the user set language and information on the type of the language of the received character information.

5. The method of claim 3, wherein the step of translating the character

information into the corresponding language and transmitting the translated character information to the TV by the translation relay site comprises:

connecting with a translation site corresponding to the language information among previously stored translation sites;

transmitting the character information to the translation site to request its translation; and

transmitting by the translation site the translated character information to the TV.

6. The method of claim 5, wherein the information on translation sites previously stored in the translation relay site is periodically updated.

7. A method for controlling a TV having a language selection function, the TV being connected with an Internet translation site; comprising:

determining whether language of currently received character information and a user set language are identical;

connecting to an Internet translation site corresponding to the user set language among previously stored Internet translation sites, and transmitting character information to request its translation; and

receiving translated character information from the Internet translation site and displaying it on a screen.

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